

Critical review of ground-borne vibration and impact assessment: principles, measurement and modelling

ABSTRACT

The aim of this paper is to review the principles of ground-borne vibration induced by road traffic. Several researchers have studied the impact of ground-borne vibration on people, structure, and equipment, and developed guidelines or standards in order to indicate the threshold limit of damage and annoyance. Measurement of ground-borne vibration is a crucial aspect in ground-borne vibration studies that needs to be understood well. The reliability of the measurement is dependent on the accuracy of the data collected. Thus, discussion in this review paper proceeds on the types of ground-borne vibration modelling that can predict and explain the phenomenon.

Keyword: Ground-borne vibration; Impact assessment; Measurement; Modelling